

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	1	"10/562652"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:53
L4	1488	(Oshiyama and Tomohiro).in. (Kita and Hiroshi).in. (Kato and Eisaku).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:54
L5	330305	(electrolumines\$ or electro-lumines\$ or opto-electr\$ or oled or light-emit\$ or emissive or luminescen\$ or 428/690.ccls. or 428/917.ccls. or 313/504.ccls. or 313/506.ccls.)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L6	312	4 and 5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L7	24	phosphoresc\$.clm. and l6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L8	1	withdrawing\$.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L9	1	withdraw\$.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:57
L10	4	lumo.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:59
L11	24	10 or 7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:56

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L12	120	((phosphoresc\$ or organometal\$ or (metal adj3 complex) or iridium) and (element or device or pixel or oled) and (oled or electroluminesc\$ or light-emit\$ or emissive or luminescen\$ or luminous or opto-electr\$ or emission) and (sulfonyl or "so.sub.2r" or cyanine or cyanide or "cn" or electron-withdraw\$ or (electron adj4 withdraw\$)) and (anode or electrode or cathode)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:02
L13	34	(ev or bandgap or homo or lumo or level or energy).clm. and l12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:03
L14	34	13 and 5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:03

STN search - 10/562,652

FILE COVERS 1907 - 17 Dec 2007 VOL 147 ISS 26
FILE LAST UPDATED: 14 Dec 2007 (20071214/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

<http://www.cas.org/infopolicy.html>

(Registry Numbers)

=> e us20070099025/pn

E1 1 US2007099023/PN
E2 1 US2007099024/PN
E3 1 --> US2007099025/PN
E4 1 US2007099026/PN
E5 1 US2007099027/PN
E6 1 US2007099028/PN
E7 1 US2007099030/PN
E8 1 US2007099031/PN
E9 1 US2007099032/PN
E10 1 US2007099033/PN
E11 1 US2007099034/PN
E12 1 US2007099035/PN

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L1 1 US2007099025/PN

=> d all

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:35085 CAPLUS
DN 142:102910
ED Entered STN: 14 Jan 2005
TI Organic electroluminescent device, illuminating device, and display
IN Oshiyama, Tomohiro; Kita, Hiroshi; Katoh, Eisaku
PA Konica Minolta Holding, Inc., Japan
SO PCT Int. Appl., 80 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM H05B033-22
ICS H05B033-14; G02F001-1335
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005004549	A1	20050113	WO 2004-JP9391	20040625
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1651013	A1	20060426	EP 2004-746860	20040625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	CN 1817066	A	20060809	CN 2004-80019019	20040625
	US 2007099025	A1	20070503	US 2005-562652	20051227 <--

PRAI JP 2003-193519 A 20030708
 WO 2004-JP9391 W 20040625

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005004549	ICM	H05B033-22
	ICS	H05B033-14; G02F001-1335
	IPCI	H05B0033-22 [ICM,7]; H05B0033-14 [ICS,7]; G02F0001-1335 [ICS,7]; G02F0001-13 [ICS,7,C*]
	IPCR	H05B0033-14 [I,C*]; H05B0033-14 [I,A]; H05B0033-22 [I,C*]; H05B0033-22 [I,A]
EP 1651013	ECLA	H01L051/00M6; H01L051/00M6H8; H01L051/00M6H14
	IPCI	H05B0033-22 [ICM,7]; H05B0033-14 [ICS,7]
	IPCR	H05B0033-14 [I,C*]; H05B0033-14 [I,A]; H05B0033-22 [I,C*]; H05B0033-22 [I,A]
CN 1817066	ECLA	H01L051/00M6; H01L051/00M6H8; H01L051/00M6H14
	IPCI	H05B0033-22 [I,A]; H05B0033-14 [I,A]; G02F0001-13357 [I,A]; G02F0001-13 [I,C*]
US 2007099025	ECLA	H01L051/00M6; H01L051/00M6H8; H01L051/00M6H14
	IPCI	H01L0051-54 [I,A]; H01L0051-50 [I,C*]
	NCL	428/690.000; 428/917.000; 313/504.000; 313/506.000
AB	An organic electroluminescent device comprising at least a light-emitting layer containing a phosphorescent compound between an anode and a cathode is characterized by comprising an adjoining layer so arranged between the light-emitting layer and the cathode as to be adjacent to the light-emitting layer and containing a compound with an electron-withdrawing group having an HOMO at -5.7 eV to -7.0 eV and an LUMO at -1.3 eV to -2.3 eV.	
ST	org electroluminescent device display illumination app	
IT	Light sources (backlight; organic electroluminescent device, illumination apparatus and display)	
IT	Electroluminescent devices (displays; organic electroluminescent device, illumination apparatus and display)	
IT	Luminescent screens (electroluminescent; organic electroluminescent device, illumination apparatus and display)	
IT	Electroluminescent devices Phosphorescent substances (organic electroluminescent device, illumination apparatus and display)	
IT	372956-40-6	817638-41-8 817638-42-9 817638-43-0 817638-44-1 817638-45-2 817638-46-3 817638-47-4 817638-48-5 817638-49-6 817638-50-9 817638-51-0 817638-53-2 817638-55-4 817638-56-5
	RL: DEV (Device component use); USES (Uses) (organic electroluminescent device, illumination apparatus and display)	
RE.CNT	6	THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE	(1) Nippon Hoso Kyokai; JP 200386376 A 2003 (2) President Of Osaka University; JP 200345663 A 2003 (3) Toppan Printing Co Ltd; JP 08-8065 A 1996 CAPLUS (4) Toppan Printing Co Ltd; JP 2000150168 A 2000 CAPLUS (5) Toyota Central Research And Development Laboratories Inc; EP 1202608 A2 2002 CAPLUS (6) Toyota Central Research And Development Laboratories Inc; JP 2002203683 A 2002 CAPLUS	

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E7	1	817638-46-3/BI
E8	1	817638-47-4/BI
E9	1	817638-48-5/BI
E10	1	817638-49-6/BI
E11	1	817638-50-9/BI
E12	1	817638-51-0/BI
E13	1	817638-53-2/BI
E14	1	817638-55-4/BI
E15	1	817638-56-5/BI

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	6.20	6.41
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CA SUBSCRIBER PRICE	-0.78	-0.78

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DICTIONARY FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0

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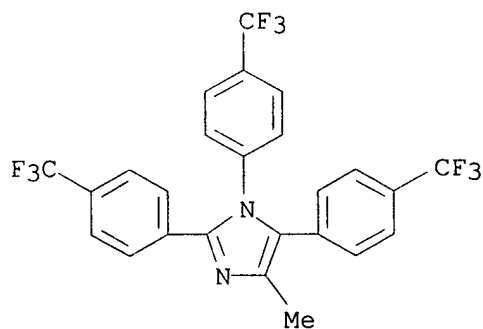
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 RN 817638-56-5 REGISTRY
 ED Entered STN: 21 Jan 2005
 CN 1H-Imidazole, 4-methyl-1,2,5-tris[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)
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 LC STN Files: CA, CAPLUS, USPATFULL

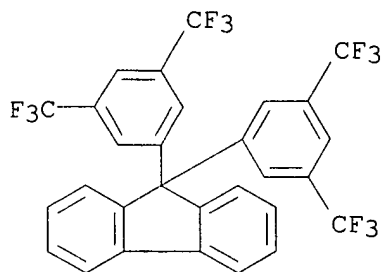


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L2 ANSWER 2 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 817638-55-4 REGISTRY
 ED Entered STN: 21 Jan 2005
 CN 9H-Fluorene, 9,9-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)
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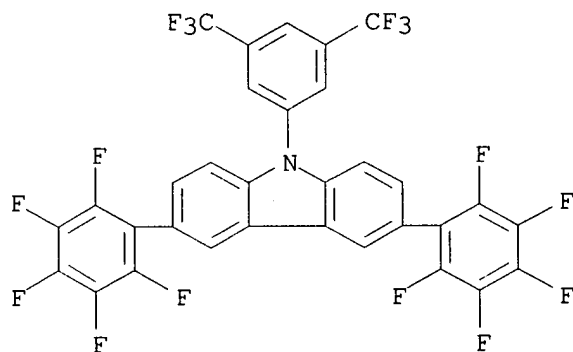
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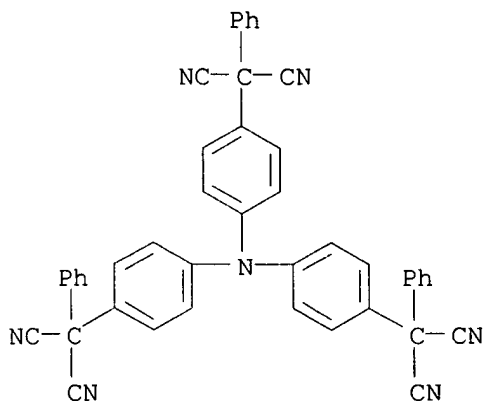


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L2 ANSWER 3 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817638-53-2 REGISTRY
ED Entered STN: 21 Jan 2005
CN 9H-Carbazole, 9-[3,5-bis(trifluoromethyl)phenyl]-3,6-bis(pentafluorophenyl)- (9CI) (CA INDEX NAME)
MF C32 H9 F16 N
SR CA
LC STN Files: CA, CAPLUS, USPATFULL





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L2 ANSWER 5 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-50-9 REGISTRY

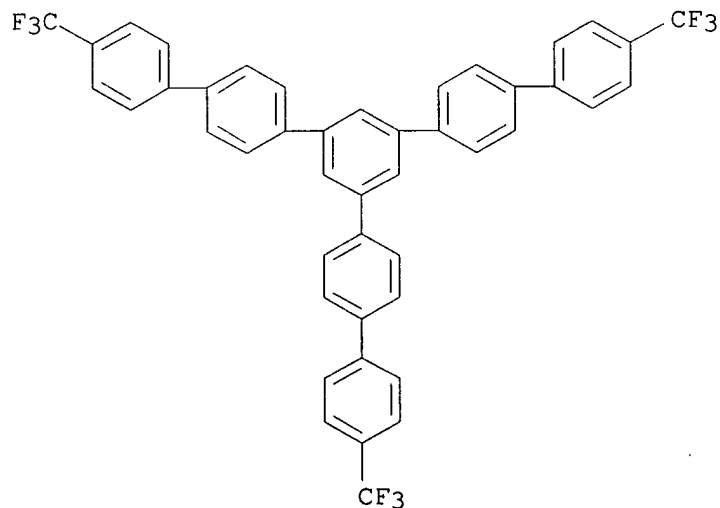
ED Entered STN: 21 Jan 2005

CN 1,1':4',1'':3'',1''':4''',1''''-Quinquephenyl, 4,4''''-bis(trifluoromethyl)-5''-[4'-(trifluoromethyl)[1,1'-biphenyl]-4-yl]- (9CI)
(CA INDEX NAME)

MF C45 H27 F9

SR CA

LC STN Files: CA, CAPLUS, USPATFULL



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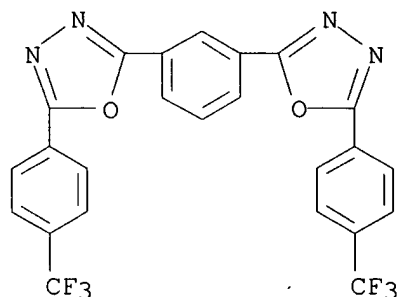
L2 ANSWER 6 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-49-6 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1,3,4-Oxadiazole, 2,2'-(1,3-phenylene)bis[5-[4-(trifluoromethyl)phenyl]-
(CA INDEX NAME)

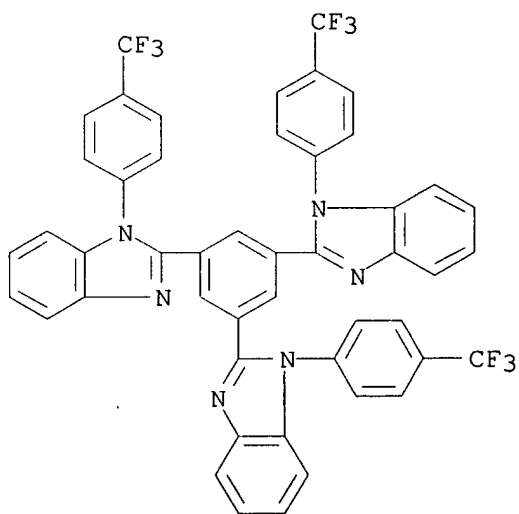
MF C24 H12 F6 N4 O2
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L2 ANSWER 7 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 817638-48-5 REGISTRY
 ED Entered STN: 21 Jan 2005
 CN 1H-Benzimidazole, 2,2',2''-(1,3,5-benzenetriyl)tris[1-[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)
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 LC STN Files: CA, CAPLUS, USPATFULL

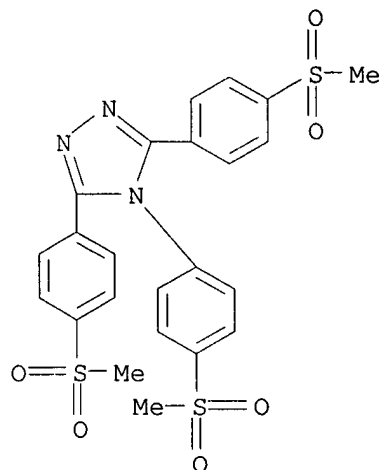


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 RN 817638-47-4 REGISTRY
 ED Entered STN: 21 Jan 2005
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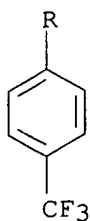
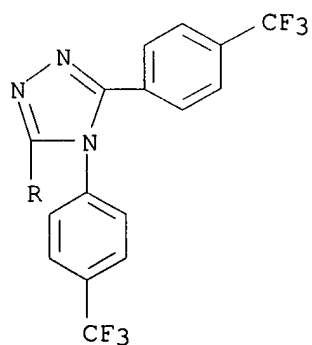
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 LC STN Files: CA, CAPLUS, USPATFULL



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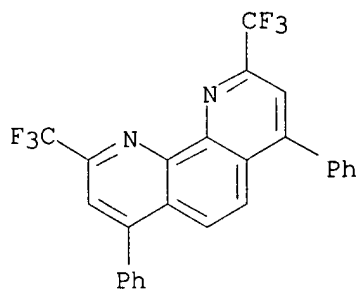
L2 ANSWER 9 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 817638-46-3 REGISTRY
 ED Entered STN: 21 Jan 2005
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 MF C23 H12 F9 N3
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 LC STN Files: CA, CAPLUS, USPATFULL



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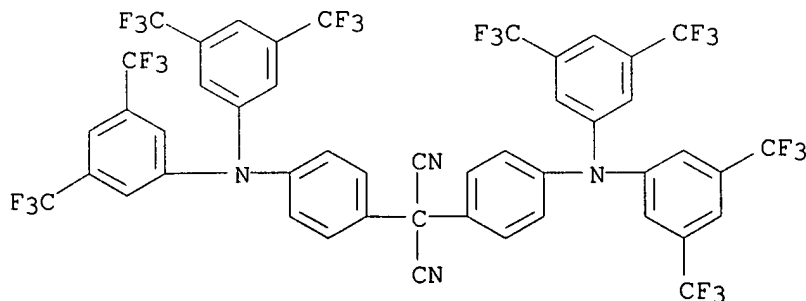
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RN 817638-45-2 REGISTRY
ED Entered STN: 21 Jan 2005
CN 1,10-Phenanthroline, 4,7-diphenyl-2,9-bis(trifluoromethyl)- (CA INDEX NAME)
MF C26 H14 F6 N2
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 11 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817638-44-1 REGISTRY
ED Entered STN: 21 Jan 2005
CN Propanedinitrile, bis[4-[bis[3,5-bis(trifluoromethyl)phenyl]amino]phenyl]- (9CI) (CA INDEX NAME)
MF C47 H20 F24 N4
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LC STN Files: CA, CAPLUS, USPATFULL

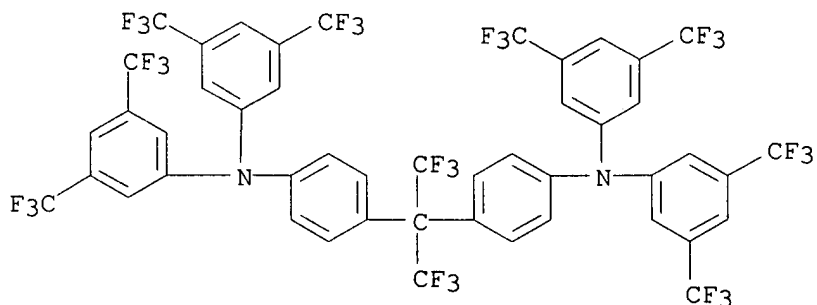


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L2 ANSWER 12 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

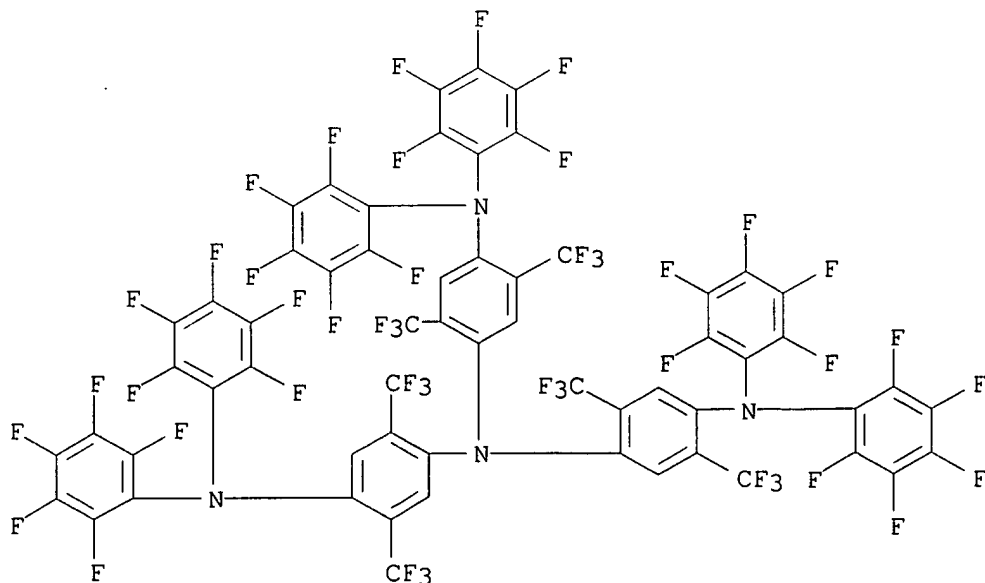
RN 817638-43-0 REGISTRY
 ED Entered STN: 21 Jan 2005
 CN Benzenamine, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[N,N-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)
 MF C47 H20 F30 N2
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



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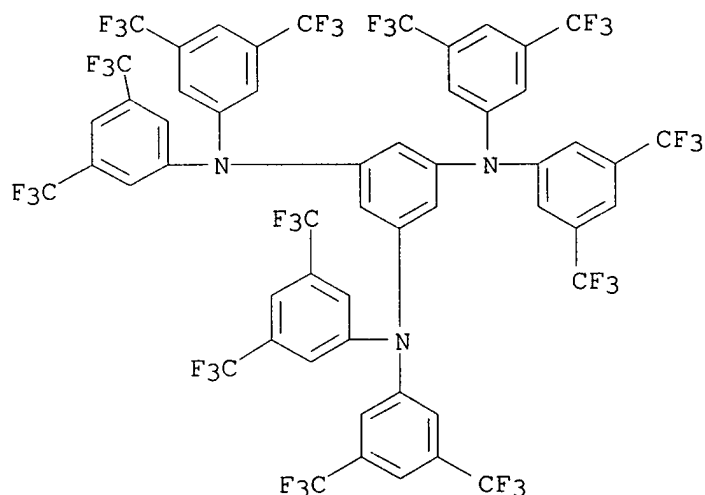
L2 ANSWER 13 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 817638-42-9 REGISTRY
 ED Entered STN: 21 Jan 2005
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 MF C60 H6 F48 N4
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



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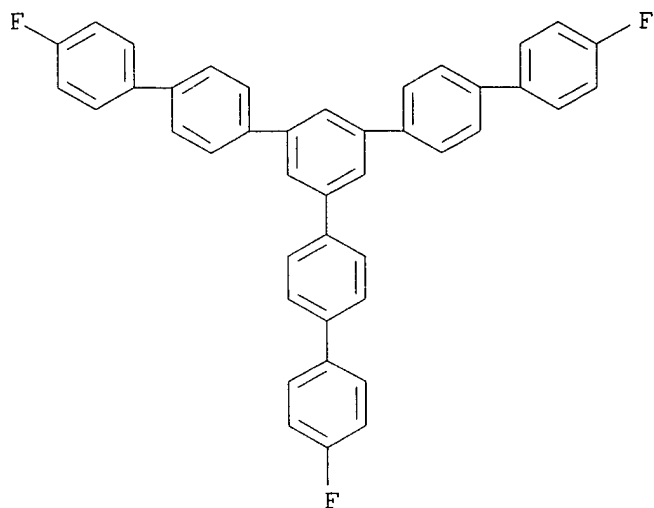
L2 ANSWER 14 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
RN 817638-41-8 REGISTRY
ED Entered STN: 21 Jan 2005
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MF C54 H21 F36 N3
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 15 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
RN 372956-40-6 REGISTRY
ED Entered STN: 03 Dec 2001
CN 1,1':4',1'':3'',1''':4''',1''''-Quinquephenyl, 4,4''''-difluoro-5''-(4'-fluoro[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)
OTHER NAMES:
CN 1,3,5-Tris(4-fluorobiphenyl-4-yl)benzene
CN F-TBB
MF C42 H27 F3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL



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17 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	29.70	36.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.78

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=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L2 4 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L3 1 817638-51-0/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.53	36.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FILE LAST UPDATED: 14 Dec 2007 (20071214/ED)

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=> S L3

L4 2 L3

=> DIS L4 1- IBIB IABS
YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 5.66 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:138480 CAPLUS
DOCUMENT NUMBER: 142:249440
TITLE: Organic electroluminescent elements with improved

INVENTOR(S): brightness, emission efficiency, and durability and lighting apparatus and displays using them
 Oshiyama, Tomohiro; Kato, Eisaku; Suzurizato, Yoshiyuki; Kita, Hiroshi
 PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 57 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005044791	A	20050217	JP 2004-195397	20040701
PRIORITY APPLN. INFO.:			JP 2003-193520	A 20030708
OTHER SOURCE(S):	MARPAT 142:249440			

ABSTRACT:

The elements, useful for blue- or white-emitting backlights for LCD, have layers containing triarylamine derivs. bearing electron-withdrawing groups adjacent to light-emitting layers between anodes and cathodes. The layers show good hole-barrier properties.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:35085 CAPLUS
 DOCUMENT NUMBER: 142:102910
 TITLE: Organic electroluminescent device, illuminating device, and display
 INVENTOR(S): Oshiyama, Tomohiro; Kita, Hiroshi; Katoh, Eisaku
 PATENT ASSIGNEE(S): Konica Minolta Holding, Inc., Japan
 SOURCE: PCT Int. Appl., 80 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005004549	A1	20050113	WO 2004-JP9391	20040625
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1651013	A1	20060426	EP 2004-746860	20040625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1817066	A	20060809	CN 2004-80019019	20040625
US 2007099025	A1	20070503	US 2005-562652	20051227
PRIORITY APPLN. INFO.:			JP 2003-193519	A 20030708
			WO 2004-JP9391	W 20040625

ABSTRACT:

An organic electroluminescent device comprising at least a light-emitting layer containing a phosphorescent compound between an anode and a cathode is characterized by comprising an adjoining layer so arranged between the light-emitting layer and the cathode as to be adjacent to the light-emitting layer and containing a

compound with an electron-withdrawing group having an HOMO at -5.7 eV to -7.0 eV and an LUMO at -1.3 eV to -2.3 eV.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	7.07	43.71
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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DICTIONARY FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0

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=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L2 11 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L5 1 817638-44-1/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
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FULL ESTIMATED COST	ENTRY 0.53	SESSION 44.24
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.34

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 FILE LAST UPDATED: 14 Dec 2007 (20071214/ED)

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=> S L5

L6 2 L5

=> DIS L6 1 IBIB IABS

THE ESTIMATED COST FOR THIS REQUEST IS 2.83 U.S. DOLLARS
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:138480 CAPLUS
 DOCUMENT NUMBER: 142:249440
 TITLE: Organic electroluminescent elements with improved brightness, emission efficiency, and durability and lighting apparatus and displays using them
 INVENTOR(S): Oshiyama, Tomohiro; Kato, Eisaku; Suzurizato, Yoshiyuki; Kita, Hiroshi
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 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PRIORITY APPLN. INFO.:			JP 2003-193520	A 20030708
OTHER SOURCE(S):	MARPAT 142:249440			

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 The elements, useful for blue- or white-emitting backlights for LCD, have layers containing triarylamine derivs. bearing electron-withdrawing groups adjacent to light-emitting layers between anodes and cathodes. The layers show good

hole-barrier properties.

=> d his

(FILE 'HOME' ENTERED AT 15:35:49 ON 17 DEC 2007)

FILE 'CAPLUS' ENTERED AT 15:36:00 ON 17 DEC 2007
E US20070099025/PN

L1 1 S E3
 DELETE SELECT Y
 SEL L1 RN 1-

L2 FILE 'REGISTRY' ENTERED AT 15:37:07 ON 17 DEC 2007
 15 S E1-E15

L3 FILE 'REGISTRY' ENTERED AT 15:38:00 ON 17 DEC 2007
 SET TERMSET E#
 DEL SEL Y
 SEL L2 4 RN
 1 S E1/RN
 SET TERMSET LOGIN

L4 FILE 'CAPLUS' ENTERED AT 15:38:04 ON 17 DEC 2007
 2 S L3

L5 FILE 'REGISTRY' ENTERED AT 15:39:56 ON 17 DEC 2007
 SET TERMSET E#
 DEL SEL Y
 SEL L2 11 RN
 1 S E1/RN
 SET TERMSET LOGIN

L6 FILE 'CAPLUS' ENTERED AT 15:40:01 ON 17 DEC 2007
 2 S L5